DERM NOTES ON WATER-SEWER INSTALLATION:

A HORIZONTAL DISTANCE OF AT LEAST 6 FEET, AND PREFERABLY 10 FEET (OUTSIDE TO OUTSIDE), 1. SHALL BE MAINTAINED BETWEEN GRAVITY OR PRESSURE SEWER PIPES AND WATER PIPES. THE MINIMUM HORIZONTAL SEPARATION CAN BE REDUCED TO 3 FEET FOR VACUUM-TYPE SEWERS OR FOR GRAVITY SEWERS WHERE THE BOTTOM OF THE SEWER PIPE IS AT LEAST 6 INCHES BELOW THE BOTTOM OF THE WATER PIPE.

WHEN THE ABOVE SPECIFIED HORIZONTAL DISTANCE CRITERIA CANNOT BE MET DUE TO AN EXISTING UNDERGROUND FACILITY CONFLICT, SMALLER SEPARATIONS ARE ALLOWED IF:

a-THE SEWER PIPES ARE DESIGNED AND CONSTRUCTED EQUAL TO THE WATER PIPE AND PRESSURE TESTED AT 150 PSI.

b-THE SEWER IS ENCASED IN A WATERTIGHT CARRIER PIPE OR CONCRETE.

c-THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER PIPE.

A VERTICAL DISTANCE OF AT LEAST 12 INCHES (OUTSIDE TO OUTSIDE) SHALL BE MAINTAINED 2. BETWEEN ANY WATER AND SEWER MAINS WITH SEWER PIPES PREFERABLY CROSSING UNDER WATER MAINS. THE MINIMUM VERTICAL SEPARATION CAN BE REDUCED TO 6 INCHES FOR VACUUM-TYPE SEWERS OR FOR GRAVITY SEWERS WHERE THE SEWER PIPE IS BELOW THE WATER MAIN. THE CROSSING SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST 6 FEET FROM ALL JOINTS IN GRAVITY AND PRESSURE SEWER PIPES. THE DISTANCE CAN BE REDUCED TO 3 FEET FOR VACUUM-TYPE SEWERS. WHEN THE ABOVE SPECIFIED VERTICAL DISTANCE CRITERIA CANNOT BE MET DUE TO AN EXISTING UNDERGROUND FACILITY CONFLICT, SMALLER SEPARATIONS ARE ALLOWED

> a-THE SEWER PIPES ARE DESIGNED AND CONSTRUCTED EQUAL TO THE WATER PIPE AND PRESSURE TESTED AT 150 PSI.

b-THE SEWER IS ENCASED IN A WATERTIGHT CARRIER PIPE OR CONCRETE.

- IN HIGHLY CONGESTED AREAS, WHERE EITHER WATER OR SEWER FACILITIES ARE EXISTING AND THE 3. SEPARATION REQUIREMENTS CANNOT BE MET, SPECIAL CONSIDERATION MAY BE GIVEN SUBJECT TO SUBMITTAL OF DOCUMENTATION SHOWING THAT THE PROPOSED ALTERNATIVE WILL RESULT IN AN EQUIVALENT LEVEL OF RELIABILITY AND PUBLIC HEALTH PROTECTION.
- THE CONTRACTOR SHALL VERIFY NATURE, DEPTH, AND CHARACTER OF EXISTING UNDERGROUND 4. UTILITIES PRIOR TO START OF CONSTRUCTION.
- 5. ALL OTHER PUBLIC OR PRIVATE UTILITY FACILITIES SHALL BE CONSTRUCTED AT LEAST 5 FEET FROM ANY WATER AND SEWER MAIN AS MEASURED FROM THE OUTSIDE BELL OF THE WATER OF THE UTILITY PIPE.
- WHEN THE 5 FEET SEPARATION BETWEEN PROPOSED AND EXISTING LINE IS NOT POSSIBLE, THE 6. CONTRACTOR SHALL HAND DIG OR EXPOSE THE WATER AND SEWER PIPES BEFORE PROCEEDING WITH POWER EQUIPMENT EXCAVATION.
- IN NO CASE SHALL A CONTRACTOR INSTALL UTILITY PIPES, CONDUITS, CABLES, ETC. IN THE SAME 7. TRENCH PARALLEL AND ABOVE AN EXISTING WATER OR SEWER PIPE EXCEPT WHERE THEY CROSS. ANY DEVIATION FROM NOTES 6, 7 AND 8 SHALL BE APPROVED IN WRITING BY THE RESPONSIBLE WATER AND SEWER UTILITY.
- A NON-RESETTABLE ELAPSED TIME METER SHALL BE INSTALLED AT EACH PUMP TO RECORD THE 8. TOTAL NUMBER OF OPERATING HOURS OF THE STATION.

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